



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,153	10/06/2003	Herfried J. Lammer	2418.0773-01	5749

22852 7590 03/28/2005

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
LLP
901 NEW YORK AVENUE, NW
WASHINGTON, DC 20001-4413

EXAMINER

NGUYEN, TAI V

ART UNIT	PAPER NUMBER
----------	--------------

3729

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SN

Office Action Summary	Application No.		Applicant(s)	
	10/678,153		LAMMER, HERFRIED J.	
	Examiner		Art Unit	
	Tai Van Nguyen		3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,14-16 and 28-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,14-16 and 28-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/117,151.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The applicant's amendment filed 1/20/2005 has been fully considered and made of record.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

3. Claims 1-3, 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Vandergrift (US 5,775,715).

As applied to 1, Vandergrift discloses a method of making a piezoelectric film comprising: obtaining a piezoelectric material (14, Fig. 2), reducing the piezoelectric material to particles (column 8, lines 26-38); and contacting the particles with a flexible matrix material (column 4, lines 58-65+); and applying the matrix material to one or more surfaces of a member, wherein the member a ski apparatus (column 3, lines 43-57).

As applied to claim 2 and 7, Vandergrift discloses the piezoelectric material comprises at least one piezoelectric material titanium oxide (column 7, lines 33-45).

As applied to claim 3, Vandergrift discloses further comprising: contacting the particles with an organic binder, the binder comprising at least one organic material chosen from wax and nylon (column 8, lines 8-25).

Art Unit: 3729

As applied to claim 4, Vandergrift discloses further comprising: sintering the piezoelectric material to make a ceramic material (column 6, lines 65+).

As applied to claim 6, Vandergrift discloses the matrix material comprises at least one flexible material chosen from an epoxy resin (column 8, lines 18-25).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 14, 5 and 28 rejected under 35 U.S.C. 103(a) as being unpatentable over Vandergrift in view of Dai et al (US 5,792,379).

As applied to claim 14, 5 and 28, Vandergrift discloses a method of making a piezoelectric film comprising: obtaining a piezoelectric material (14, Fig. 2), the piezoelectric material comprising at least one oxide chosen from lead oxide, zirconium oxide, and titanium oxide (column, lines 33-45); contacting the piezoelectric material with an organic binder, the binder comprising at least one organic material chosen from nylon (column 8, lines 8-25); sintering the piezoelectric material to make a ceramic material (column 3, lines 65-68), milling said ceramic material into particles; contacting the particles with a flexible matrix material (column 5, lines 1-13), molding the matrix material onto a surface of a member, and curing the matrix material (column 7, lines 40-

Art Unit: 3729

45), wherein the piezoelectric film facilitates a substantial dampening of vibrations from the member (column 8, lines 50-65+).

However, Vandergrift does not teach a milling the ceramic material into particles. Dai et al teach milling ceramic material into particles (column 4, lines 49-59). It would have been an obvious to one of ordinary skill in the art at this time the invention was made to have modified the Vandergrift method by milling, as taught by Dai et al, to positively provide better densification at low temperatures (see column 2, lines 35-40).

As applied to claims 15 and 29, Vandergrift disclose applying electrodes to the matrix material (column 7, lines 50-65+).

6. Claims 16 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vandergrift in view of Dai et al and further in view of Dixon (US 3,958,161).

Regarding to claims 16 and 30, Vandergrift as modified by Dai et al, discloses substantially all limitations of the claimed invention above. However, the modified method does not disclose the step of polarizing the matrix material with an electromagnetic field. Dixon teaches polarizing the matrix material with an electromagnetic field (see column 4, lines 1 1-43). It would have been obvious to one ordinary skill in the art at this time the invention was made to improve the modified Banno et al method by polarizing the matrix material with an electromagnetic field, as taught by Dixon, to positively provide a reliable method of monitoring polarization of a piezoelectric transducer.

Response to Arguments

7. Applicant's arguments with respect to claims 1-7, 14-16 and 28-30 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tai Van Nguyen whose telephone number is 571-272-4567. The examiner can normally be reached on M-F (7:30 A.M - 4:30 P.M).

Art Unit: 3729

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TN.
March 18, 2005



A. DEXTER TUGBANG
PRIMARY EXAMINER